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Tool Overview

Cancer Genome-Wide Association Studies (caGWAS) allows researchers to integrate, query, report, and analyze significant associations between genetic variations and disease, drug response or other clinical outcomes. New breakthroughs in SNP array technologies make it possible to genotype hundreds of thousands of single nucleotide polymorphisms (SNPs) simultaneously, enabling whole genome association studies. Within the Clinical Genomic Object Model (CGOM), the caIntegrator team created a domain model for Whole Genome Association Study Analysis. CGOM-caGWAS is a semantically annotated domain model that captures associations between Study, Study Participant, Disease, SNP Association Analysis, SNP Population Frequency and SNP annotations. Following the principals of caBIG, caGWAS APIs and web portal provide:

- A semantically annotated domain model, database schema with sample data, seasoned middleware, APIs, and web portal for GWAS data;
- platform and disease agnostic CGOM-caGWAS model and associated APIs;
- the opportunity for developers to customize the look and feel of their GWAS portal;
- a foundation of open source technologies;
- a well-tested and performance-enhanced platform, as the same software is being used to house the CGEMS data portal at <https://caintegrator.nci.nih.gov/cgems>;
- accelerated analysis of results from various biomedical studies; and
- a single application through which researchers and bioinformaticians can access and analyze clinical and experimental data from a variety of data types, as caGWAS objects are part of the CGOM, which includes microarray, genomic, immunohistochemistry, imaging, and clinical data.

What's New

What's new on caGWAS?

At A Glance Details

Current Version Number: 1.0.2

Release Date of Current Version: May 2009

Intended Audiences: Translational Research

Primary Workspace: ICR

Currently caGrid Enabled? Yes

caBIG? Compatibility Level: Silver Compatibility (5/28/2009)

caGWAS Public Server

A public caGWAS hosted by NCI is free to community.
Free account will be issued upon registration.

Technical Information

Tool Maturity Assessment: Stable Release (Adoption in Progress)
Installation Level: Intermediate - technical assistance may be required, download may require supporting infrastructure or software

System Requirements:

The caGWAS has been tested on Linux Red Hat Enterprise Linux AS 4 64/32-bit (for AMD chipset) and the Windows XP/2003 environments. While the application may work in other Linux and Windows environments, it has only been tested in these environments.

System & Software	Version
Linux - Tested Environment	<ul style="list-style-type: none">• HP ProLiant DL585• AMD Opteron 852 2.4 (4 processors)• 32GB memory• Red Hat Enterprise Linux 4 AS• 400 GB local storage
Windows - Tested Environment	<ul style="list-style-type: none">• HP ProLiant DL585• AMD Opteron 852 2.4 (4 processors)• 16GB memory• Windows 2003 Enterprise Edition Service Pack 2• 400 GB NTFS local storage
Database:	MySQL, 5.0.27 or Oracle 9i
Developer Institution(s)	NCICB

Presentations, Demos and Other Materials

[caGWAS Demo Presentation](#): a 22-minute Audio over Slides and Screencast (make sure your speakers are on to play audio)

[Download Slides](#) - No audio or live demo

Documentation, Meeting and Training

Project Site	Documents	Download & Test Data
Project site	<ul style="list-style-type: none">• caGWAS User Guide• Online help• caGWAS Configuration Guide• caGWAS Technical Guide	<ul style="list-style-type: none">• caGWAS test data site userid/pwd :cagwas_user/cagwas_user <ul style="list-style-type: none">• DB Sample Data Loading Scripts• Download caGWAS

caGWAS Knowledge Base

caGWAS FAQ & In-depth Articles

Find the answers to the most frequently asked questions; understand how caGWAS works.

caGWAS Demos

caIntegrator in depth: demo, articles and more.

caGWAS Case Studies

Still don't know if caGWAS is for you? Case studies will show you some examples of how caGWAS could be used in different scenarios.

caGWAS Success Stories

Each institution could have its own unique setting and requirement. Share your success or even not so successful story here. Your inputs will help others.

caGWAS Citations

- [caGWAS Citations](#)

Installation/Downloads

- [Download, Install or Upgrade caGWAS](#)
- [NCI caGWAS](#) public server is free to whole community.

Forum & Support for caGWAS & caIntegrator

Forum	Support	Archived Info
<ul style="list-style-type: none">• End User Forum• Developer Forum	<ul style="list-style-type: none">• Please Post questions in one of the Forums.	

Submit defects and feature requests on caGWAS & caIntegrator

- [Report a defect/feature request for caIntegrator](#)
- [Report a Defect or Request a Feature in Bugzilla \(not yet functional\)](#)

Open-source development

- [Link to caIntegrator Open Development Code Base](#)